REPORT

ON THE

FINAL EXAMINATIONS

IN

MEDICINE, SURGERY, AND MIDWIFERY

OF THE

UNIVERSITY OF GLASGOW

BY THE VISITOR, DR. DONALD MACALISTER,
AND THE INSPECTOR, DR. G. F. DUFFEY, APPOINTED BY THE

GENERAL MEDICAL COUNCIL.

JUNE–JULY 1894.

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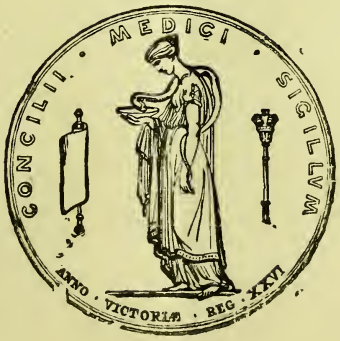

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REPORT

ON THE

FINAL PROFESSIONAL EXAMINATIONS

FOR THE

DEGREES OF M.B. AND C.M. OF THE UNIVERSITY OF GLASGOW.

(JUNE–JULY 1894.)

UNDER the (old) Regulations applicable to the Final Examinations of this University, three Medical Degrees are conferred, namely, Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.) The Degrees of Bachelor of Medicine and Master in Surgery may be obtained by Candidates of the age of twenty-one years at least who have complied with the University Regulations as to Education and Examination. The Degree of Master in Surgery is not conferred on any person who does not at the same time obtain the Degree of Bachelor of Medicine, nor the Degree of Bachelor of Medicine on anyone who does not at the same time obtain the Degree of Master in Surgery.

The courses of instruction required for the Degrees of M.B. and C.M. are similar to those required by the University of Edinburgh (*see* Report on that University). A certificate of instruction in *Vaccination* must, however, be produced in addition; and in *Practical Midwifery*, as an alternative to three months' attendance on the indoor-practice of a Lying-in Hospital, it is required that of the twelve cases of Labour which the Candidate must have "been present at," three at least must have been conducted personally by himself.

The Examinations are Written, Oral, and Clinical or Practical. "If any Candidate on examination be found un-

qualified, he shall not be again admitted to examination unless he shall have completed another year of medical study, or such portion of another year as may be fixed by the Examiners when he is found unqualified." If a Candidate is found to have passed with sufficient merit in all the subjects with the exception of one, he is remitted in that subject and is exempted from re-examination in the other subjects. But to obtain this exemption he must have gained an average of at least 55 per cent. of the marks given for these subjects. If he is deficient in *two* subjects he is rejected on the whole of the Examination. For this purpose, as we were informed, the "subjects" of examination are:—(1) Medicine (including Paper, Oral, "Objective" and Clinical Examination); (2) Surgery (including Paper, Oral, Bandaging, &c., Operations, and Clinical Examination); (3) Midwifery (Paper and Oral); (4) Medical Jurisprudence (Paper and Oral); and (5) Pathology (Paper, Oral, and Practical Examination). The Examinations are conducted by the Professors of the University together with other (extern) Examiners appointed by the University Court. The fee for the Degrees of M.B. and C.M. is twenty-two guineas.

The Final Examinations that we visited, and at portions of all the different parts of which one or other of us was present, commenced on Wednesday, June 6, 1894, and continued until Thursday, July 19. One hundred and thirty-four Candidates, including four women, were entered for the Examination. The order in which the Examinations were conducted was: (1) The Clinical; (2) Operative Surgery; (3) The Written; (4) The Oral. We were informed that a change in this order is under consideration.

THE CLINICAL EXAMINATIONS.

All the Clinical Examinations in Surgery and most of those in Medicine were held in the Western Infirmary; some of the latter took place in the Victoria Infirmary. The Examinations in Clinical Medicine occupied fifteen days, and those in Clinical Surgery twelve days. If a Candidate fails in Clinical Medicine or in Clinical Surgery, he is allowed to go on with the Examination, but not if he fails in both.

(A) Clinical Medicine.

The Examiners in this subject were Professors McCall Anderson and Gairdner, and Dr. E. Duncan, of the Victoria Infirmary, as additional Examiner. The first four days of the Examination were occupied by what is called an "Objective" Examination (to be subsequently described). This was taken by all the Candidates, and was conducted by Prof. McCall Anderson and Dr. Duncan. Then followed the ordinary Bedside portion of the Examination, at which one or other Professor examined on alternate days, Dr. Duncan being also an Examiner on each occasion.

At the Objective Examination, thirty-five Candidates were examined each day. It was held in one of the wards of the Infirmary, and the arrangements for the supervision of the Candidates during their examination and for preventing any intercommunication were—as in all the other parts of the Examination—most efficient. Ten Candidates at a time were admitted into the ward. Five of these were sent separately to different parts of the ward, where were placed, at five different tables, certain "subjects" of examination. As soon as the Candidates had dealt with a "subject" they interchanged places, so that each Candidate had five "subjects" to deal with, the answers in each case being given in writing. Of the other group of five Candidates one at a time was taken to the end of the ward to examine two patients, in the presence of both the Examiners, and to answer such questions on the cases as might be given him. When the first five Candidates had finished this portion of the Examination, they took the place of those who had been examined on the cases, and so on, until all the thirty-five Candidates told off for the day's examination had been disposed of.

The "subjects" of the first part of the Objective Examination on June 12 were as follows:—

I. Microscopical preparations of (*a*) Uric acid; (*b*) Stellar phosphates; (*c*) Granular tube-casts—to be recognised.

II. Microscopical preparations of (*a*) Tricophyton tonsurans; (*b*) Trichina spiralis—to be recognised.

III. A prescription for a sedative mixture in a case of Gastric Ulcer—to be written out in proper form.

IV. A Stomach tube—the instrument and its purpose to be described.

V. A case of Scrophuloderma. "What skin disease is this patient suffering from? Give in a tabular form the reasons for your diagnosis."

The Professor's Assistant supervised the Candidates at this part of the Examination.

The Clinical cases selected for the Objective Examination on the occasion of our visit were (A) one of aneurysm of the arch of the aorta, and (B) one of spastic paralysis. In case (A) the Candidates were required to make a physical examination of the tumour, by inspection. palpation, percussion, and auscultation; to state its position, and to discuss the ætiology and treatment of the disease. In case (B) they were directed to test for the patellar reflex and ankle clonus; asked in what diseases these phenomena were present or absent; the site of the lesion in the cord in such diseases; the causes of atrophy of the muscles in certain spinal diseases, &c. Fifteen minutes were usually assigned to this part of the Examination; but there was no fixed time-limit either for it or for the other part. In both parts, different cases and "subjects" for examination were provided on each day. Five marks were given for a full answer on each of the "subjects," and five for each of the cases, making a total of thirty-five marks for the "Objective" Examination. This left sixty-five marks as the maximum for the Bedside part of the Clinical Examination, the marks for the two being added together for the total in Clinical Medicine.

Twelve Candidates as a rule were examined at each day's Clinical proper, or Bedside Examination. Each Candidate was sent to a specified bed in the wards, and told to examine and take notes of the case assigned to him. During the progress of this part of the Examination, one Candidate at a time was examined in a side-room on some one well-marked Clinical case—*e.g.*, wrist-drop from lead poisoning. The time occupied in this part of the Examination varied, according to the answering of the Candidate, from four to twelve minutes. There was no

limit of time for the Bedside Examination, or for the subsequent Oral Examination on it. The latter was conducted with much conscientiousness, and great consideration was shown to certain Candidates whose answers to a few plain questions showed that they had a very imperfect knowledge of the subject. The notes of the cases taken by the Candidates were solely for their own use. They were read out or referred to by the Candidate during his Oral Examination, but were not given up to the Examiners at the end, nor apparently read or appraised by them. It is unnecessary to give a complete list of the cases utilised for examination. They had been carefully selected, and nearly all were in our opinion quite suitable for the purpose. The patient's urine was in each instance placed in readiness, and was examined when necessary by the Candidate. We noted the following cases among those provided on one of the days, at the Victoria Infirmary: Aortic regurgitation; chorea, in a pregnant woman; mitral obstruction; slight pleurisy: tuberculous peritonitis, with amyloid kidney; facial paralysis, with bronzing of the skin; mitral regurgitation, with albuminuria; subacute parenchymatous nephritis; acute pleuro-pneumonia. On another day, at the Western Infirmary, the following cases were submitted to the Candidates: Elephantiasis (?), following repeated inflammation of the legs; pulmonary phthisis; congenital cardiac disease; locomotor ataxy; mitral obstruction, with hæmoptysis; renal colic (?); subacute rheumatism; chorea, with mitral disease; paraplegia; exophthalmic goître; doubtful abdominal tumour; chronic chorea. It should be added that many of the Candidates were taken over a second case, in particular those who had not been quite successful in dealing with the first submitted to them.

(B) Clinical Surgery.

Professors G. Buchanan and Macewen, with Dr. Barlow, of the Royal Infirmary, and Mr. Maylard, of the Victoria Infirmary, were the Examiners. The first two days were occupied with a general testing of all the Candidates as to their knowledge of

fractures, bandaging, instruments, &c. Each pair of Examiners examined about thirty-five Candidates on each day. The Examination was held in two separate rooms, one of the Professors and an extern Examiner sitting in each. In each room were a number of male patients, and an assortment of various appliances and apparatus, splints, bandages, &c. The patients bore consecutive numbers, and each had a card on which was printed the name of a fracture. The Candidate was given a number, and then proceeded to put up the fracture which the corresponding patient was supposed to have. The Candidates were questioned as to the objects they desired to attain by the methods of treatment they adopted; the nature of the displacement of the fragments in the different fractures, and the manner in which such displacements were caused; the length of time the different appliances should be left on; and similar practical questions. Some of the Candidates were also directed to apply special bandages—*e.g.*, a capeline—or to bandage the hand and arm to above the elbow, and put the arm in a sling. Both Examiners acted together, but generally questioned the Candidates alternately. One of the Professors and his Assessor occasionally asked a few questions on instruments; the other Professor did not examine on these, as he did not attach great importance to such knowledge. He was particular, however, in ascertaining that the Candidates could, as far as possible, make their own appliances for the treatment of fractures, &c., and with this object many Candidates were required to mould and cut out from sheets of poro-plastic felt and india-rubber the splints, &c., they required. There was no time-limit for the Examination.

The Professors arranged among themselves as to the days upon which each, with his Assessor, should conduct the Clinical Examination proper. The Inspector was present on June 14, when Prof. Macewen and Dr. Barlow were the Examiners; and the Visitor on June 25, when Prof. Buchanan and Dr. Barlow examined.

On the first of these days the twelve Candidates whose examination in Clinical Medicine the Inspector had attended on the preceding day were examined. Provision was made against the Candidates having any previous knowledge of the patients

upon whom they were to be examined. There were three patients, each with a number attached, and screened off from the others. A paper with printed instructions was given to each Candidate, and he was required to give on it a description of the cases in their order. The papers contained spaces for the "diagnosis" and the "reasons for conclusion (which must be found in each case)," together with the following "instructions":—"Candidates are requested to put on paper all they know about each case, as what they record is taken as a test of their knowledge of the case." Ten minutes were allowed for each of the three cases. Three Candidates at a time being admitted to the Examination-room, they interchanged cases at the expiration of the allotted period. The Examiners abstained intentionally from overlooking the Candidates at their work; but they were supervised by the Professor's House Surgeon.

As soon as each batch of Candidates had examined the three cases their places were taken by a fresh batch. Those who had finished were then placed apart and called in as required in alphabetical order to the Professor's room. The Professor and the extern Examiner alternately took a Candidate, first reading his papers and then examining him critically thereon and on the cases generally. The cases provided on the first day were:—(1) Disease of sacro-iliac synchondrosis; (2) Rodent ulcer (recurrent) of inner canthus; (3) Ischio-rectal abscess. Even when the diagnosis given in the paper was incorrect (as frequently happened) the subsequent Oral Examination, which generally lasted from ten to fifteen minutes, was of great value in ascertaining the real knowledge of the Candidates, and in supplementing their attempts at written description. In one case, in which there was some doubt as to a Candidate, he was given a fourth case—one of Ranula—to examine. The mark in each case was the joint award of both Examiners. The maximum mark was 100, and this was also the maximum mark for the first, or Practical, portion of the Examination, and the mean of these two was the final mark assigned for Clinical Surgery.

On June 25 the method was the same, five cases being provided. These were (1) Tuberculous disease of tarsus; (2) Enchondromata of phalanges; (3) Tuberculous disease of elbow; (4) Chronic synovitis of knee (probably gonorrhœal);

(5) Lipoma of flank. Of these each Candidate had to take brief notes of three and give his views as to diagnosis and treatment. The Oral Examination, as before, was searching and practical, and the marks awarded appeared to be on the whole fairly earned.

OPERATIVE SURGERY.

All the arrangements for this part of the Examination were admirably devised. It was held on July 3, 4, and 5, in a well-ventilated and well-lighted (apparently temporary) building, amply provided with every requirement. There were five uninjected bodies. Adjacent to each table on which a cadaver was placed, there was an abundant supply of instruments; and on the adjoining portion of the wall was hung a roller-arrangement, on turning which the names of five operations appeared on a printed list. Each of these rollers had a series of fifty operations, arranged differently for each of the tables. Out of the number of Candidates summoned for each day, five at a time went to each of four of the subjects, and each Candidate had to perform the operation, of the five operations appearing on the list, that fell by chance to his lot. The list of operations was so well arranged, that all the five operations could be done at the same time without risk of the Candidates interfering with one another in their work. Moreover, the operations that had been done on a given cadaver did not render difficult the performance of subsequent operations on the same body. The operations assigned to the several Candidates on July 5, when the Visitor was present, were as follows:—

Table I.—(1) Amputation at right knee joint; (2) Ligation of right lingual artery; (3) Amputation through lower half of left upper arm; (4) Cholecystotomy; (5) Amputation of left leg at seat of election. *Table II.*—(1) Circular amputation through left upper arm in lower third; (2) Syme's amputation at right ankle; (3) Suprapubic cystotomy; (4) Ligation of left lingual artery. *Table III.*—(1) Syme's amputation at right ankle; (2) Excision of left knee joint; (3) Excision of right shoulder joint (4) Disarticulation of left little finger, with

metacarpal bone; (5) Ligation of left common carotid artery. *Table IV.*—(1) Amputation at right knee joint; (2) Ligation of left external iliac artery; (3) Amputation of left forearm; (4) Ligation of right brachial artery in middle of arm; (5) Trephining over left middle meningeal artery for hæmorrhage. *Table V.*—(1) Amputation through left forearm; (2) Excision of right knee joint; (3) Amputation through lower third of left leg; (4) Ligation of right subclavian artery: (5) Subperiosteal excision of portion of rib on left side.

As a rule, only one operation was required from each Candidate. If a second one was considered necessary, the name of the operation was written on a blackboard at the end of the room, and it was done on the additional subject provided for the purpose. The Examiners (Prof. MACEWEN and Dr. BARLOW), supervised the Candidates at their operations, but did not interfere with or question them during their work. A laboratory attendant or junior student acted as assistant at each table, acting under the direction of the operator, when he desired it. The assistant held a limb, retracted parts, or the like, but made no suggestions to the Candidate. When the Candidates had finished, they stood aside and were called up one by one and questioned on their operation and on the Surgical Anatomy &c. of the parts. Thus a Candidate who had creditably performed an excision of the knee joint was asked:—"What arteries have you cut? What muscle is this? (rectus) Have you severed the popliteal? How would you close your wound? What splint would you use? Would the limb after recovery be quite rigid? Would you saw through the tibia or the femur first? In what plane do you saw through the femur?" This Candidate answered fairly and was assigned 60 per cent. of the marks for his work. The women Candidates were examined in exactly the same way as the men. One had to perform an amputation at the right wrist; another to ligate the femoral artery; another to ligate the left common carotid; a fourth to amputate the arm at the elbow. Two of these operations were very well done; the others were unsuccessful. The mark awarded for Operative Surgery was included with the marks for the Written and Oral Examinations in the final mark for Systematic Surgery, of which it was equivalent to one fifth part.

THE WRITTEN EXAMINATION.

This Examination was held on July 9, 10, and 11, in the Examination Hall of the University. The Candidates were seated at separate numbered desks, arranged in four rows at each side of the central passage. Each Candidate took his seat at the table, which bore the same number as that against his name in the printed list. There was ample supervision. The papers (*see* Appendix) were set by the Professor and the extern Examiner in each of the subjects, and had been previously submitted to the Medical Court for approval. The answers are divided among the respective Examiners. Two Examiners, however, must read the answers if they are marked by either below 50 per cent. for a pass, or above 70 per cent. for honours. We read a number of the answers in each of the subjects, including those of several Candidates whose Clinical and Oral Examinations we had also heard. There were comparatively few instances of bad spelling. The following examples, however, were exceptions: (A) girgle (gurgle); doey (doughy); syphlis; epididimis; corndyloma; epiphesis; instertial; vicera; craniatomy. (B) tincle, incompatable; dilation; rouge (rugæ); lutium overy; umbellical; putrifies; caster oil; shreads. (C, a woman) Inflammed (several times); neutrition; fontenelles; dentritic; gonnorrhœa; ice clothes; crainiotomy; vaginissmus; laudnaum; radicle (treatment); volcellum; cervicle (scissors). Candidate (A) was remitted for re-examination in Medicine; (B) was rejected; (C) was remitted in Surgery. In all the subjects, except in Systematic Surgery, the "Written" and the "Oral" marks are valued equally (maximum 100), the single (final) mark given for the two parts being the mean of those obtained in each part.

THE ORAL EXAMINATIONS.

These Examinations commenced on Thursday, July 12, and ended on Thursday, July 19. Pathology may be taken either at the Third or at the Fourth (Final) Professional Examination.

On the present occasion, out of the 70 Candidates who had not previously taken it, 58 only presented themselves for the Examination in Pathology, the remainder having either been previously stopped at their Clinical Examinations or withdrawn. The Oral Examination in Pathology occupied the whole of two days. In the other subjects seventeen or eighteen Candidates were in general examined on each day. One of us attended the Oral Examinations on July 12 and 13, and both of us were present at portions of all of them on July 14.

As far as possible we followed the examination in the different subjects of the same Candidates. Each Candidate had a card, which he presented at the successive tables, and this was initialed by an Examiner when he had finished with the Candidate.

(A) Medicine.

The Examiners were Professors McCall Anderson and Gairdner, with Dr. Duff, of Chester, as extern Examiner. On the first day, Dr. McCall Anderson examining, Candidate A was asked the date of appearance of the rash in the Exanthemata and in the continued Fevers, the characters of the rash in Scarlet Fever and in Measles, and the symptoms, complications, and treatment of these diseases; the forms of Bright's disease, and the head symptoms and cerebral lesions in cases of gouty kidney; the causes of hemiplegia, &c. This Candidate's examination lasted ten minutes, and he answered well. The next Candidate (B) was questioned by Dr. Duff, chiefly on Pneumonia and Pleurisy. A third Candidate (C), examined by Professor Anderson, was shown a coloured drawing of a case of facial paralysis, and asked what side was affected, &c.; also an illustration of wrist-drop, and questioned on the diseases in which that condition occurred; the lesion in alcoholic paralysis, usual position of the foot in that affection, and the sex in which it was most commonly met with. He was then shown a plate of Alopecia areata (which he recognised), and was asked as to the supposed nature of the affection, and to write a prescription for it, the mixture to contain nux vomica and arsenic. This he

did correctly. He was then asked to give the position of the lower edge of the liver in the nipple line, and to mention any condition that would lower the margin apart from disease of the organ itself; to distinguish Hydrothorax from pleural effusion; the different causes of enlargement of the liver, and the characters of the urine in amyloid disease. The next two Candidates (D and E) were examined by Dr. DUFF. D was taken on Apoplexy, its causes and symptoms; the diagnosis of sudden unconsciousness; the parts affected in complete hemiplegia; the period of incubation and invasion of Scarlet Fever, its symptoms, and the diagnosis from Diphtheria. Candidate E was examined on Rheumatic Fever, its symptoms, treatment, and complications; cerebral embolism; rupture of a cerebral artery from disease of a distant organ; physical signs of a phthisical vomica, &c. These Examiners always referred to the mark given to the Candidate for his Written Examination before giving their final award. As before stated, this was the mean of the "Written" mark and what the Examiners considered—but did not, as far as we noted, put down definitely in figures—the value of the answers at the Oral. Thus, in the case of one of the above Candidates, who had got only forty-five for his paper, but who answered well at the Oral, it was agreed by both Examiners that he "was worth" 55 per cent. This was equivalent to assigning a mark of sixty-five for the "Oral" alone. And in the case of another Candidate, whose "Written" mark was fifty-one, but who answered badly at his Oral, the final mark was fixed at 45 per cent.—in other words, he received thirty-nine for his "Oral." In both cases we are of opinion that the award was a correct one.

On July 13 and 14 Professor GAIRDNER examined with Dr. DUFF. The first Candidate whose examination by the Professor we heard, was questioned on the difference between a central and peripheral lesion of the facial nerve. He hardly answered a single question, though fifteen minutes were spent on his examination on this subject. He was given 22 marks, the same as he had received for his Written Examination. Dr. DUFF examined the next Candidate (F) on Pulmonary Emphysema. He did not know how this disease caused obstruction to the blood-flow, or what effect it had on the heart. As to the

physical evidences of dilatation of the right ventricle he was very uncertain, and equally so as to those of œdema of the lungs. He could not give any cause of cerebral apoplexy except hæmorrhage. He was also asked what parts were paralysed in complete hemiplegia; the site of the lesion if the arm and leg of one side only were paralysed; the site if the third nerve was involved; and the evidences that the facial nerve was affected. His answers to the latter questions were, we thought, mere guesses. Dr. DUFF being naturally dissatisfied with the Candidate's answering, Professor GAIRDNER asked him to describe the clinical forms of Bright's disease, and the symptoms of each. This he did very unsatisfactorily, stating, among other things, that more urea was excreted in the chronic types of the disease than in health. He was also completely ignorant of the characters of the urine in amyloid kidney. His examination lasted altogether for thirty minutes. He was given 50 for his Oral, an award apparently influenced by his marks for the Clinical Examination (58½ per cent.) In our opinion the Candidate did not deserve the mark he received for the Oral Examination, and should have been rejected in Medicine on his answering in it alone. His final mark in Medicine was 50. He ultimately passed the Examination, and is now, as a Graduate in Medicine and Surgery of the University of Glasgow, a qualified medical practitioner. In several other instances we could not help feeling surprised at the liberal marks assigned by the same Examiners to Candidates whose oral answering was neither ready nor accurate. We could only assume that the Examiners had information respecting the Candidates' merits from previous acquaintance with them, or from knowledge as to their performance in other parts of the Examination, which was not before us at the time of the "Oral" itself.

(B) SURGERY.

The first day's Oral Examination in Surgery was conducted by Prof. MACEWEN and Mr. MAYLARD in the Professor's room in the University. On some other days it was held in the Examination Hall. Numerous pathological specimens, wax models

casts, &c., were made use of in the Examination. There was no fixed time-limit, but ten minutes was the average. At each sitting of the Examiners the Candidates were usually examined on the same two specimens, and frequently asked to explain some points regarding their answers in the Written Examination. Thus on July 12 a cast of Hey's luxation, and a specimen of sarcomatous tumour of the lower end of the tibia, were shown. Both subjects were fully questioned upon, in addition to other matters of general Surgery. A humerus with sequestra was also shown, and Candidates asked the symptoms a patient with such an affection would present, and what treatment should be adopted. On July 13 Dr. Barlow acted as extern Examiner with Prof. Macewen. A specimen of oblique fracture of the lower third of the femur was shown, and a Candidate was asked about the injury, and how it should be put up. Questions were also given him on disease of the middle cuneiform bone, and its possible results; the causes of hæmaturia from the bladder; the diagnosis and treatment of a vesical villous papilloma. Another Candidate was shown three casts of disease of the female mamma, and asked what they represented—the history &c. of each being given; and he was interrogated as to the varieties of cancer, their histological characters, &c. A specimen of osteomyelitis of the femur was also shown him, and he was questioned thereupon. Another Candidate had, among the subjects of his examination by Dr. Barlow, Strangulated hernia, Erysipelas, and Imperforate anus. We were both present on third day, when Prof. Macewen and Dr. Barlow were again the Examiners. The whole Examination was, in every respect, a most searching and practical one. The marks given in all the cases we saw were just, and never erred on the side of leniency, although every consideration and courtesy was shown to the Candidates. At the conclusion of the Oral examination of each Candidate, his final mark for Surgery was made up and entered on the Schedule. This mark was calculated as follows:—The maximum for the Written and the Oral and for Operative Surgery being 100 for each, the marks for the Written and the Oral were added together and multiplied by two; to the amount thus obtained the mark for Operative Surgery was added, and the total divided by five. Thus, in the case of Candidate (A)—one of

the Candidates whose Examination we followed throughout (*see* p. 15), his marks were :—Written, 40; Oral, 20; Operative, 35. His final mark, therefore, was :—

$40 + 20 = 60$; $\times 2 = 120$; $+ 35 = 155$; $\div 5 = 31$.

This Candidate was accordingly remitted in Surgery.

(C) Midwifery.

The Examiners were Professor Murdoch Cameron and Dr. Sloan. They were liberally supplied with specimens and instruments, gynæcological and obstetrical; normal and abnormal female pelves; fœtal skulls; models; and a phantom with doll. Twelve minutes usually were spent in the examination of each Candidate, but there was no fixed time-limit. A Candidate whose paper had been read by one Examiner was examined orally by the other. Sometimes both Examiners questioned the same Candidate. This was the case with the first Candidate whose examination we heard. The Professor took him on the coverings of the fœtus; the stages of labour; the causes of delay in the third stage; the dangers of traction on the cord; the diagnosis between retroversion and retroflexion, and the treatment of the latter; what pessary would he use (there was a variety on the table)? how is the pessary introduced? how long left in? Dr. Sloan then asked him the length of the cavity of the unimpregnated uterus; what might cause it to be as long as $4\frac{1}{2}$ inches? precautions before passing uterine sound? early indications of pregnancy? The Candidate was then taken to the phantom, and the head having been placed high, he was asked what instrument he would select for delivering, and to demonstrate the method of its introduction. He was given 50 marks for his answering, and his mark for the Written Examination having been 52, his final mark for Midwifery was the mean of the two, namely 51. Candidate A (see pp. 15, 19) was examined on transverse presentation; version; rupture of the uterus; dysmenorrhœa; diagnosis between ovarian cyst and ascites; and uterine tumours. Candidate B on salpingitis; extra-uterine pregnancy; measurements of the pelvis; causes of deformities of the pelvis and the methods of measuring them; perforator; hook; traction-forceps; menstrua-

tion ; indications of pregnancy ; time of quickening ; distinction between active and passive movements of fœtus; "the first question the attendant should ask a woman on visiting her for the first time after delivery" ; in what cases retention of urine is likely to occur ; how soon an aperient should be given after delivery ; the danger in giving an aperient earlier than forty-eight hours after delivery; prolapse of uterus and inversion ; coverings of the fœtus; causes of abortion. This Candidate's "Written" mark was 66. He was given 64 for his Oral, and his final mark, therefore, was 65. Candidate C was examined on the subject of Ovarian cysts, and asked to describe in detail the preparation of a patient for the operation of Ovariotomy, and to name the instruments &c. that the operator might require ; also the instruments for Craniotomy. Questions were also given on pelvic cellulitis and on *post partum* hæmorrhage. Candidate E was asked the signs of pregnancy ; management of mother after delivery ; when the cord falls off ; when first teeth appear and number of teeth in first dentition ; length of time an infant should be kept at breast ; indications for application of the forceps in delayed labour ; definition of *post partum* hæmorrhage ; extra-uterine pregnancy and anteflexion.

The Examination was a good and a practical one ; but would have been more so in the latter respect if the phantom and some of the specimens had been oftener called into use. The marking was on the whole somewhat liberal : only one Candidate, out of the entire number entered, was marked below 50 per cent.

(D) Medical Jurisprudence.

Dr. Dalziel, Professor of Medical Jurisprudence, Anderson's College, Glasgow, and Dr. Nasmyth, M.O.H. for Fifeshire &c., were the Examiners. In addition to the ordinary subjects of Examination the Candidates were required to identify various poisons and three microscopic specimens—*e.g.*, blood-corpuscles ; spermatozoa ; hairs, and silk fibres. The Examination, as far as we heard it, was one in Medical Jurisprudence and Toxicology solely. No questions were asked in Hygiene, but there was a question in the Written paper on the disinfection of a room after

its occupation by a person suffering from an infectious disease. It was not compulsory, however, to answer this question. The subject of Public Health is included under the New Regulations, but not under the Old.

(E) Pathology.

There were three Examiners in this subject—Professor Coats; Dr. Leith, Lecturer on Pathology, Edinburgh Medical School; and Dr. Steven, Lecturer on Pathology at St. Mungo's College and at Queen Margaret's College, Glasgow. Simultaneously with the Oral there was an Examination in Practical and Microscopical Pathology. All were held in the Pathological Department of the Western Infirmary. Three rooms were used for the Examination. In the first room were placed six museum specimens, and every Candidate was required to write a short descriptive account of each, with a statement of what the specimen was. The pathology of these specimens, however, was not to be given. In the next—the microscope room—each Candidate was given two mounted microscopic specimens to recognise and to write a description of under a low and a high power; and in the third room the Oral Examination was held. The Candidates were summoned in batches of fourteen. Six of these at a time were admitted to the first room, where half-an-hour was allowed for an examination of the specimens, the Candidates changing places with each other. Five others were sent to the microscope room, and the remaining three waited their turn for their Oral Examination. The Candidates in rooms 1 and 2 interchanged rooms at the expiration of each half-hour, and then waited for their Oral Examination. After the Oral Examination of a Candidate, if he had not yet been examined in either of the first two rooms, he took a place in the microscope room. The Professor's Assistant supervised the Examination in these rooms. All the specimens were changed for each fresh batch of Candidates. The following is a list of the specimens shown the first batch of Candidates on the first and on the second day of the Examination: (1) Varicose veins; Hydrocele of tunica vaginalis; Pendulous fatty tumour; Pott's spinal curvature; Periosteal sarcoma

of tibia; Phthisical vomicæ (healed) communicating with bronchi. (2) Tuberculous testis and bladder; Calculi from vermiform appendix; Cystic kidney; Ankylosis; Tuberculous ulceration of intestine; Malignant disease of lung and liver. The microscopical specimens were: (1) Trachea in diphtheria, and fatty infiltration of liver; Epithelioma, and nutmeg liver; Angioma of liver, and fatty degeneration of heart; Scirrhus of mamma, and acute meningitis; Lateral sclerosis of cord, and kidney in pernicious anæmia: (2) Lateral sclerosis, and tuberculous meningitis; Red hepatisation, and trachea in diphtheria; Fatty heart, and tubercle in lung; Chronic nephritis, and fatty liver; Anthrax kidney, and biliary cirrhosis. This Examination was a very practical one; and a large amount of ground was gone over in the Oral part of it. The answering was not very ready, and it often required much patience to elicit such knowledge as the Candidates possessed. The marking was, in our judgment, very fair. The Candidates noted for rejection certainly needed further opportunities for pathological study. In a few cases two of the Examiners, and occasionally all the three, questioned the Candidate. Some of the Candidates were examined on fresh pathological specimens—*e.g.*, a recently amputated mamma—at the Oral part. In marking, the Examiners gave 100 for the Written, 100 for the specimens and microscopes, and 100 for the Oral. The final mark was the sum of these marks divided by three. We read a considerable number of the papers, and the written descriptions of the museum and microscopic specimens, of Candidates at whose Oral Examination we were present. The answering generally was not of a high standard, but the marking did not err on the side of severity. Of the sixty-nine Candidates who took Pathology in the Examination, twenty-nine were either rejected in the whole Examination or withdrew. Three Candidates in addition were remitted in Pathology.

ADJUDICATION.

The Visitor was present at the Final Adjudication on July 20. The Board of Examiners met in the Senate Room of the University, Professor Gairdner being in the chair. Eleven

Examiners in all attended. The marks assigned to the Candidates in each subject were read out by the Secretary and taken down by the Examiners, those who received at least 50 per cent. throughout being forthwith noted as "passed." It was explained that, in the case of a Candidate whose mark was near but below this limit in any subject, his other marks being sufficient, a vote of the Examiners might be taken as to whether his deficient mark should be raised to 50 per cent., so that he might pass on the whole. The case did not arise in this form; but two Candidates who had received 48 marks in Medical Jurisprudence were by the Examiners in that subject raised to 50, one before the meeting, and one at the meeting with the assent of the Board. The effect was that the first of the two, who had an average mark of 56 in the other subjects, was passed on the whole Examination; while the other, who had an average mark of less than 55 in the remaining subjects, but had obtained only 37 in Clinical Medicine, was remitted in Medicine only. Had he been deemed to fail in *two* subjects (*see* p. 6), he would have been rejected on the whole Examination. Other apparently exceptional cases were as follows: A Candidate with 45 in Medicine and 80 in Clinical Medicine was remitted in Medicine; another with 52 and 46 in Surgery and Clinical Surgery respectively, and 47 in Pathology, was remitted in Surgery only, though according to the strict rule he should have been rejected; another with 48 in Surgery and 45 in Clinical Surgery, and 49 in Pathology, was in like manner remitted in Surgery only. One Candidate with 48 in Surgery, and another with 49 in Clinical Surgery, and good marks in the other subjects, were allowed to pass by general consent. The rule (p. 6) limiting "remission" in one subject to Candidates who obtain at least 55 per cent. in the other subjects was not strictly enforced in all cases. Thus one man was "remitted" in Medicine (48 marks), whose average mark in the other subjects was only 52.

RESULTS.

Of the one hundred and thirty-four Candidates entered for the Examination, eight did not present themselves for any portion of it. Of the remaining one hundred and twenty-six,

seventy (=55·5 per cent.) passed, and fifty-six (=45·5 per cent.) were rejected. Of the latter twenty-seven (=21·5 per cent.) were rejected on the whole examination, in addition to twenty-nine (=23 per cent.) who were remitted for re-examination in one of the subjects. Of the rejected Candidates, six were "stopped" after failure in their Clinical Examinations. The numbers remitted were: in Surgery, twenty-one; in Medicine, four; in Pathology, three; in Medical Jurisprudence, one; in Midwifery, none. Of the four women Candidates, two passed, and two were remitted in Surgery.

OBSERVATIONS.

The arrangements for the Examinations were carefully made, and were carried out methodically. The order of the Examinations was similar to that followed by the University of Edinburgh:—viz., (1) Clinical; (2) Operative Surgery*; (3) Written; (4) Oral. Candidates, however, can be "stopped" from proceeding further with their examination if they fail at both their Clinical Examinations. This arrangement is worthy of approval. With the purpose of shortening the Examination, we would endorse the suggestion made in the *Report* on the Final Examinations of the University of Edinburgh (*quod vide* p. 23), that the Written Examination should be held first, and that no Candidate should be permitted to proceed to the corresponding Clinical Examination who had not got, say, 40 per cent. for his Written Examination in Medicine or in Surgery respectively; or to the Oral in Midwifery or in Medical Jurisprudence who had not obtained the same percentage in either of those subjects, provided he had passed in Medicine and Surgery. We do not for a moment desire to suggest the cutting up of the Examination so that it could be passed piecemeal; but it appears worth while to spare Candidates who have no chance of passing the Examination the useless strain of attempting the later parts of it.

We think that a full written Report of a case and a commentary thereon, with suggestions for suitable dietetic and

* At the University of Edinburgh the Examination in Operative Surgery is held during the progress of the Oral Examinations.

general medical treatment, should be required from every Candidate at an Examination in Clinical Medicine, and that such a Report should be read and marked by one at least of the Clinical Examiners. The brief and somewhat perfunctory "notes" of medical cases taken by the Candidates at the Glasgow University Examination appeared to be of little value as a test of clinical observation and accurate expression. We look upon a written Report as a most important means of estimating the capacity of a Candidate to investigate a case carefully and methodically, and of judging whether he has acquired sufficient knowledge and command of precise technical language to enable him to practise with safety to the public and with credit to his profession and to his University.

It would perhaps be inviduous to compare the methods of Examination and of marking employed by the different Examiners; but, as regards the question of the final passing or rejection of a Candidate in Medicine or in Surgery, it was impossible not to notice that there were differences in the manner in which the questions were put, in the variety of subjects examined upon, and in the strictness with which the answers were valued by the different Professorial Examiners. In other words, it appeared to us that in some cases a doubtful Candidate, if examined by Professor A and Dr. C, might by them be given a passing mark, while if he had been examined by Professor B and the same Dr. C he would probably have been given a lower or rejecting one.

At the Oral Examinations in the other subjects, we agreed in thinking that the marking in some cases was liberal. We observed that all the Examiners, before giving the joint award at the conclusion of the Oral Examination, referred to the mark given for the Written Examination; and, in the case of the Clinical Examiners, sometimes to the Clinical marks also. While the principle of compensation between the Written and Oral parts of an Examination is no doubt admissible, we think the ultimate results would be more trustworthy if the mark for each part were in the first instance given for it on its own merits alone. The influence of former marks would then be adequately and equitably exerted when the final averaging took place.

CONCLUSION.

We have to report that the Final Examinations of the University of Glasgow are "Sufficient." We are of opinion that in some points changes in the method and standard of the Examination in Medicine are desirable in order to bring it up to the level of the Examination in Surgery.

(Signed) DONALD MACALISTER, M.D., *Visitor.*
GEORGE F. DUFFEY, M.D., *Inspector.*

APPENDIX.

EXAMINATION PAPERS.

UNIVERSITY OF GLASGOW.

FINAL EXAMINATION FOR M.B. AND C.M.

JULY 10, 1894.

MEDICINE.

Time allowed—Two Hours.

1. State generally what you know about Pneumothorax (excluding the traumatic forms); and more particularly what might be specially remarked upon in a particular case, selected for description as a typical one, of which you are to indicate shortly the physical signs, prognosis, and treatment.

2. What is Multiple Peripheral Neuritis? and how is it to be distinguished from other affections of the nervous system, more or less resembling it? Of the varieties described, name one, and indicate more in detail its aetiology, leading symptomatic characters, prognosis, and treatment.

3. In many of the specific fevers, and also in certain chronic diseases, there are now ample grounds for maintaining a bacterial origin, and it is also generally admitted that the knowledge of this, and of the circumstances influencing the propagation of these bacteria, may be turned to account in the way of prevention of such diseases. Illustrate this position by reference to not more than two such diseases, in which the facts bearing on prevention have been well established.

4. A man, sixty years of age, of robust conformation, and hitherto enjoying very good health, became subject to what may in general terms be called cardiac symptoms, but without dropsy, cyanosis, or any recognisable pulmonary complications. He continued for some time to suffer, more especially on ascending a hill, or on making suddenly some considerable exertion. He consulted his medical attendant, who prescribed remedies, under which he obtained considerable relief. At this time physical diagnosis did not reveal anything quite definitely abnormal; but at a later period indications were obtained of certain changes in the cardio-vascular system, which, together with the symptoms, justified an unfavourable prognosis, and suggested to the mind of his physician what afterwards occurred. The death of this patient, some years after the first symptoms, was appallingly sudden, and the *post-mortem* examination revealed facts in accordance with previous expectation.

Write a short commentary on the above, indicating (if you see fit) one or more views as to the nature of the case, and explaining them in accordance with the facts stated; giving also such additional facts as might be necessary to complete the diagnosis; also a sketch of the treatment which may have given relief.

N.B.—In answering Questions 1, 2, and 4, prescriptions should be written out as if intended for the chemist, with directions in English.

SURGERY.

JULY 11, 1894.

FOUR *questions only to be answered. The candidate must answer the first three.*

Time—Two Hours.

1. Describe histologically the formation of a Chronic Abscess.

2. In a case of Inherited Syphilis, state the lesions which may occur, in order of their manifestation: Give the symptoms, appearances, and treatment of the Eye lesions.

3. Give the differential diagnosis of Hydrocele of the Tunica Vaginalis, of Inguinal Hernia, and of Solid Enlargements of the Testicle.

4. Describe the mode of production and appearances found in a case of simple Fracture of the Patella from *indirect* violence: Give the pathology and mode of repair.

5. Give the situation and pathology of Urethral Strictures: Mention the morbid conditions which may result from the Stricture.

MIDWIFERY.

JULY 11, 1894.

Answer FOUR *questions only, including the fifth.*

Time—Two Hours.

1. Describe the two kinds of ante-partem hæmorrhage, referring to the cause, diagnosis, and treatment of each.

2. State the causes of delay during the second stage of labour, and give briefly the treatment for each case.

3. Enumerate the indications for premature labour, and describe the best methods of induction.

4. Describe the symptoms, course, and treatment of phlegmasia dolens.

5. Describe the various methods of treatment in cancer of the cervix uteri.

MEDICAL JURISPRUDENCE.

July 9, 1894.

Four *Questions to be answered.*

1. (*a*) Enumerate the *post-mortem* appearances indicative of recent delivery at term.

(*b*) Give the evidence of maturity in the newly-born infant.

2. Classify the circumstances which modify the onset of putrefaction in the dead body.

3. Death from carbonic oxide—

(*a*) Under what circumstances may it occur?

(*b*) What are the symptoms?

(*c*) What is the appropriate treatment?

(*d*) What are the *post-mortem* appearances?

4. Describe the symptoms and appropriate treatment in a case of acute poisoning by oxalic acid, and describe the chemical analysis required for the detection of that poison in the contents of the stomach.

5. Describe in detail how you would disinfect a room in which a person had died from small-pox or other infectious disease.

PATHOLOGY.*

July 10, 1894.

Four *Questions only to be answered.*

1. Give an account of the Filaria sanguinis and of the diseases to which it is supposed to give origin.

2. What are the exact seats in the spinal cord of the lesions in locomotor ataxia, spastic paralysis, and infantile paralysis? Give an explanation of the presence or absence of muscular paralysis or of muscular atrophy in each of them.

3. Describe the structure of the following forms of tumour and mention their most frequent situations:—flat-celled epithelioma, giant-celled sarcoma, glioma, and myxoma.

4. In what different ways does obstruction of the coronary arteries of the heart come about? What further changes in the heart will ensue?

5. What is perimetritis and how is it brought about? Describe the various conditions of the pelvic organs which may result.

* The questions in Pathology were dictated, as the printed paper was not sent in time for the Examination.